

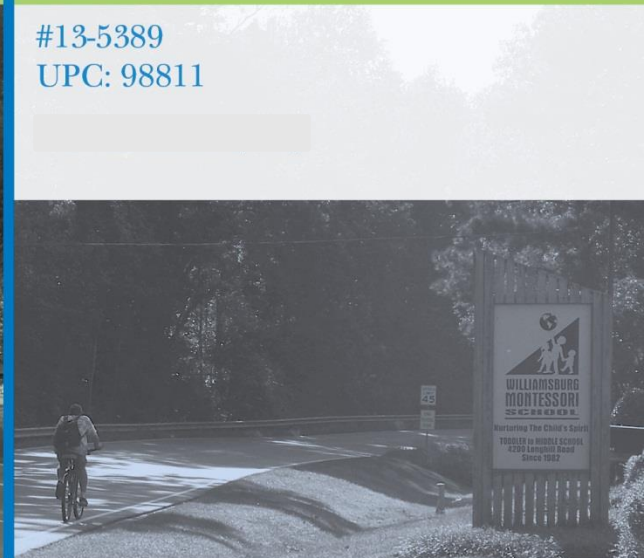


Longhill Road Corridor Study

James City County



#13-5389
UPC: 98811



PREPARED FOR



PREPARED BY



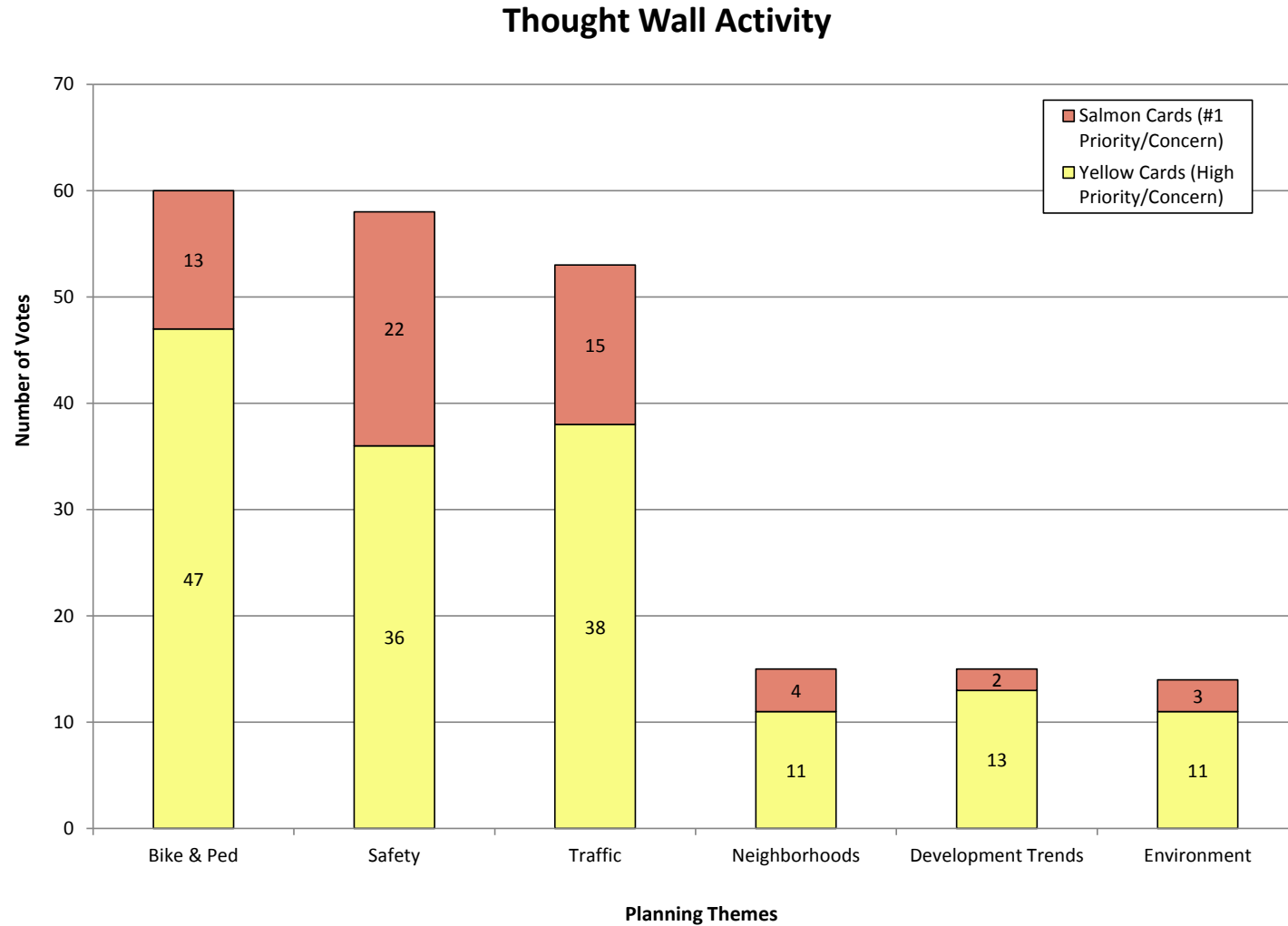
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Project Symposium

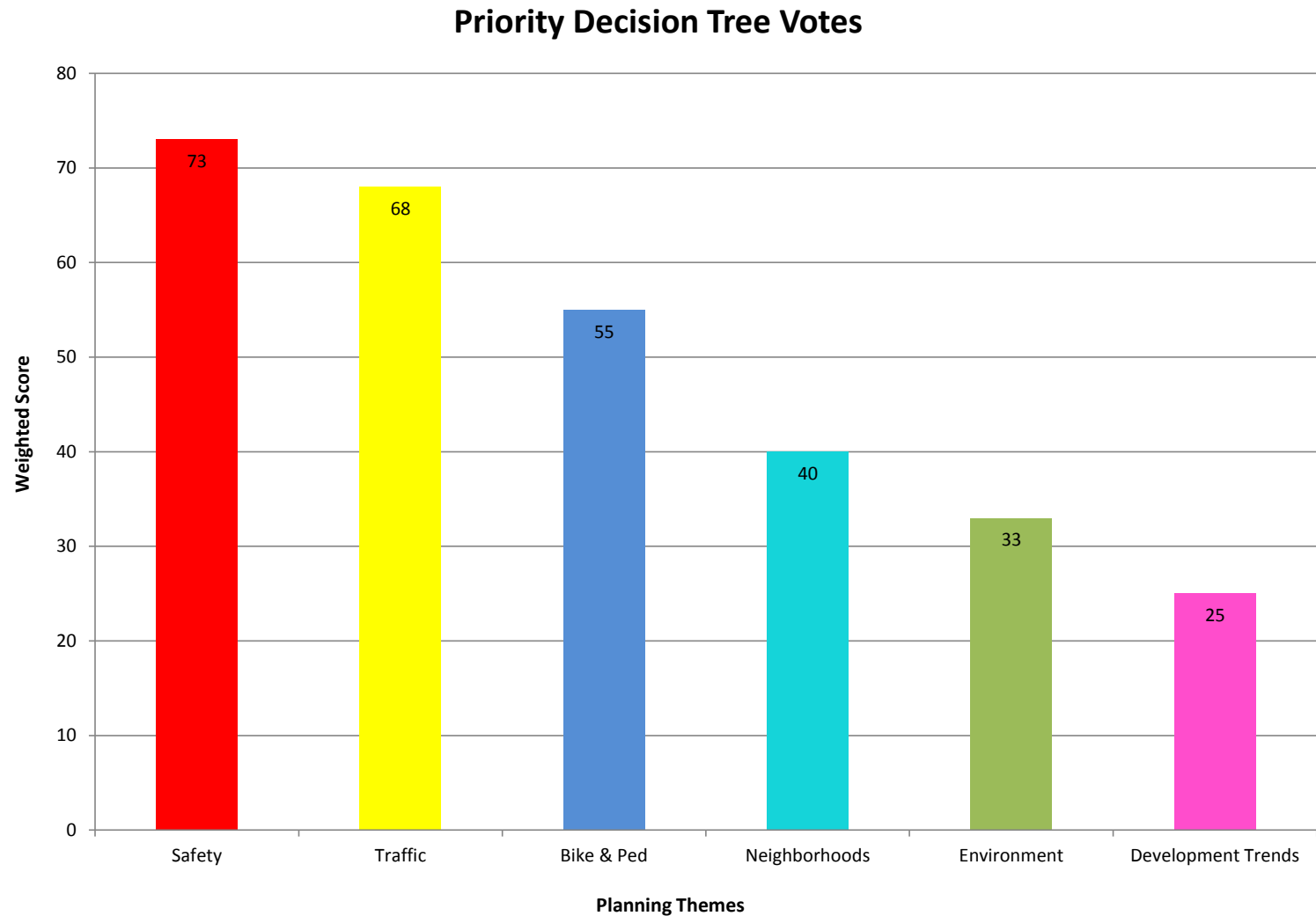
- October 3, 2013
- 70+ Attendees
- Thought Wall Exercise and Comments
- Priority Decision Tree Exercise
- Build-A-Street Exercise



Thought Wall Results



Priority Decision Tree Votes



Priority Decision Tree – Thought Wall Themes

- Safety
- Traffic Operations/Mobility
- Bike and Pedestrian Accommodations
- Environment/Neighborhoods



Build-A-Street

Table	# of Lanes	Left Turn Lane(s)	Median	Bike Lane(s)	Street Tree(s)	Planting Strip(s)	Shoulder	Multiuse Path(s)	Sidewalk(s)	Wild Card
1	4	X - 2	X - depressed with trees	-	X - 1	X - 1	-	X - 1	X - 1	-
2	4	X - 2way	-	X - 2	-	-	X - 2	X - 1	-	-
3	4	X - 2way where necessary	X - 1 where necessary	-	-	X - 1	X - 1	X - 1	-	-
4	4	X - 2way	-	X - 2 wide outside lanes	-	-	X - 2	-	-	-
5	4	X - 1 where necessary	-	-	-	-	X - 2 with street lights at intersections	X - 1	-	-
6	2	-	-	X - 1	X - 2	X - 1	-	X - 1	-	Stoplight at WISC/ Longhill Gate x-section & benches along path
7	2	X - 2way	-	X - 1	-	-	X - 2	X - 1	X - 1 with ped lighting	Bus stop pull-offs with shelters
8	2	X - 1 where necessary	X - planted median with curb & gutter	X - 2	X - 2	-	-	X - 1	-	Bus stop pull-offs with shelters
9	2	X - 1 where necessary	X - 1 where necessary	X - 1	X - 2 without curb & gutter	-	X - 1	X - 1	-	-
10	2	X - 2way	-	X - 2	X - 2	-	X - 2	-	X - 1	-
11	2	X - 2way	-	-	-	X - 1	-	X - 1	-	-
12	2	X - 2way	-	-	X - 2	-	-	X - 1	X - 1 with ped lighting	Bus stop pull-offs with shelters
13 - 199 to Olde Towne	4	-	X - depressed	-	-	X - 1	-	X - 1	-	-
13 - Olde Towne to Centerville	2	X - 1 where necessary	X - 1 where necessary	X - 1	-	-	X - 2	-	X - 1	-
14 - 199 to Olde Towne	4	X - 1 where necessary	X - 1 where necessary	-	-	X - 1	-	X - 1	-	-
14 - Olde Towne to Centerville	2	X - 2way	-	-	-	X - 1	-	X - 1	-	-

Guiding Principles

Longhill Road is an important corridor that connects people with significant places in our community; therefore, design improvements to the corridor should:

- Respect the context of the area,
- Enhance safety for all users,
- Respond to existing and projected traffic volumes,
- Be visually appealing, and
- Minimize impacts the natural and built environments.

The resulting improvements will integrate with existing neighborhoods, offer consistence with the comprehensive plan, and promote quality growth and economic vitality.

Build-A-Street Highlights

- Laneage – Split (2 lanes and 4 lanes)
 - 2 tables made the distinction:
 - 199 to Olde Towne Road – 4 lanes
 - Olde Towne Road to Centerville Road – 2 lanes
- Left-turn Lanes: Two-Way Left-Turn Lanes
- Multi-Use Path: 12 out of 14
- Wildcard: bus stop pull-offs

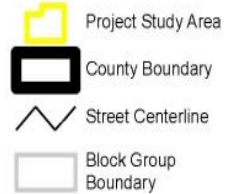


Market and Economic Assessment

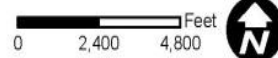
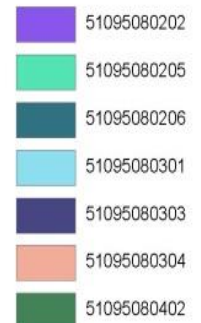
- From 2000 to 2010, population in the Longhill Road Study Area increased an average 4.8% per year, higher than the county growth rate of 3.4% per year
- Total population in the area reached 28,369 in 2010.

Longhill Road Corridor Study

Census Boundaries



CensusTract



Kimley-Horn and Associates, Inc.

Coordinate System: NAD 1983 StatePlane
Virginia South FIPS 450 Feet

James City County

Existing Traffic Volumes

Average daily traffic (ADT) volumes along the corridor today range from:

- 21,000 vehicles per day (vpd) - Route 199 to Lane Pl**
- 16,500 vpd - Williamsburg Plantation to Olde Towne Rd**
- 18,000 vpd - Glenburnie Rd to Buford Rd**
- 13,000 vpd - Lafayette High School to Warhill Trail**
- 8,700 vpd - west of Ford's Colony entrance**
- 9,600 vpd - Olde Towne Rd northeast of Longhill Rd**



1,200 ft.

Traffic Volume Projection Resources

- Hampton Roads Transportation Planning Organization
- Regional Travel Demand Model
 - 2034 Socio-Economic Data
 - 2034 Traffic Assignments
- Develop annualized growth rates
- Current zoning and allowable future development
- Existing business or institutions expansion
- Undeveloped properties
- Historical Traffic Volume Trends

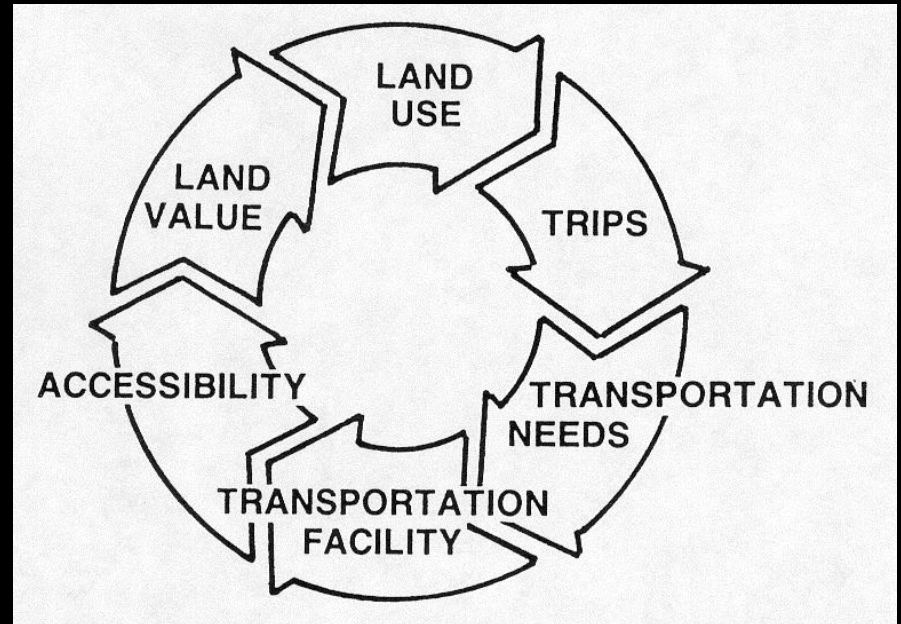
Future Traffic Volumes

Average daily traffic (ADT) volumes along the corridor today range from:

- 26,300 vehicles per day (vpd) - Route 199 to Lane Place**
- 20,600 vpd - Williamsburg Plantation to Olde Towne Rd**
- 22,500 vpd - Glenburnie Rd to Buford Rd**
- 16,500 vpd - Lafayette High School to Warhill Trail**
- 13,500 vpd - west of Ford's Colony entrance**
- 12,300 vpd - Olde Towne Rd northeast of Longhill Rd**

Improving Traffic Safety & Operations

Avoid a Cycle of Functional Obsolescence.....

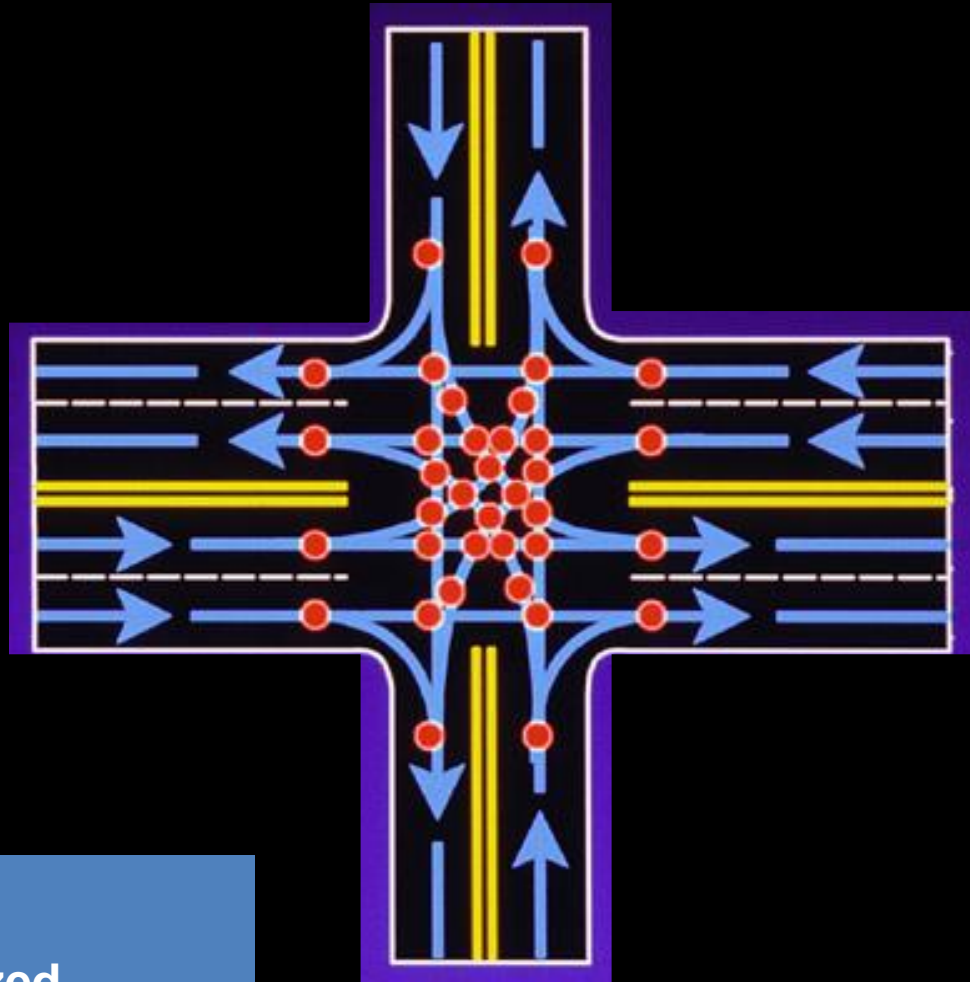


How Are Traffic Safety & Operations Often Improved?

Design and Regulation of the following:



Focus on Intersections



32 Conflicts

22 If Signalized

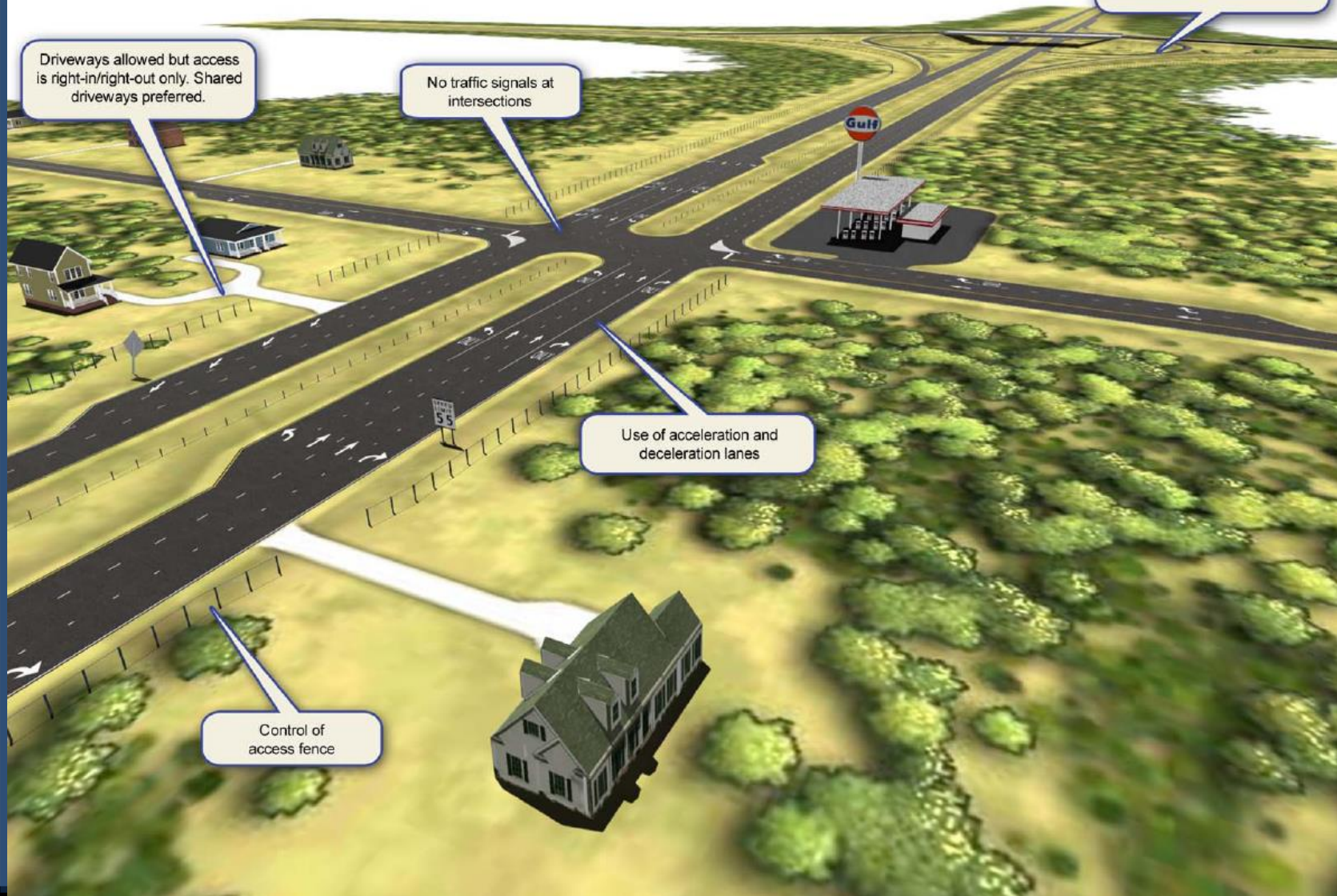
Thoroughfare – No Control



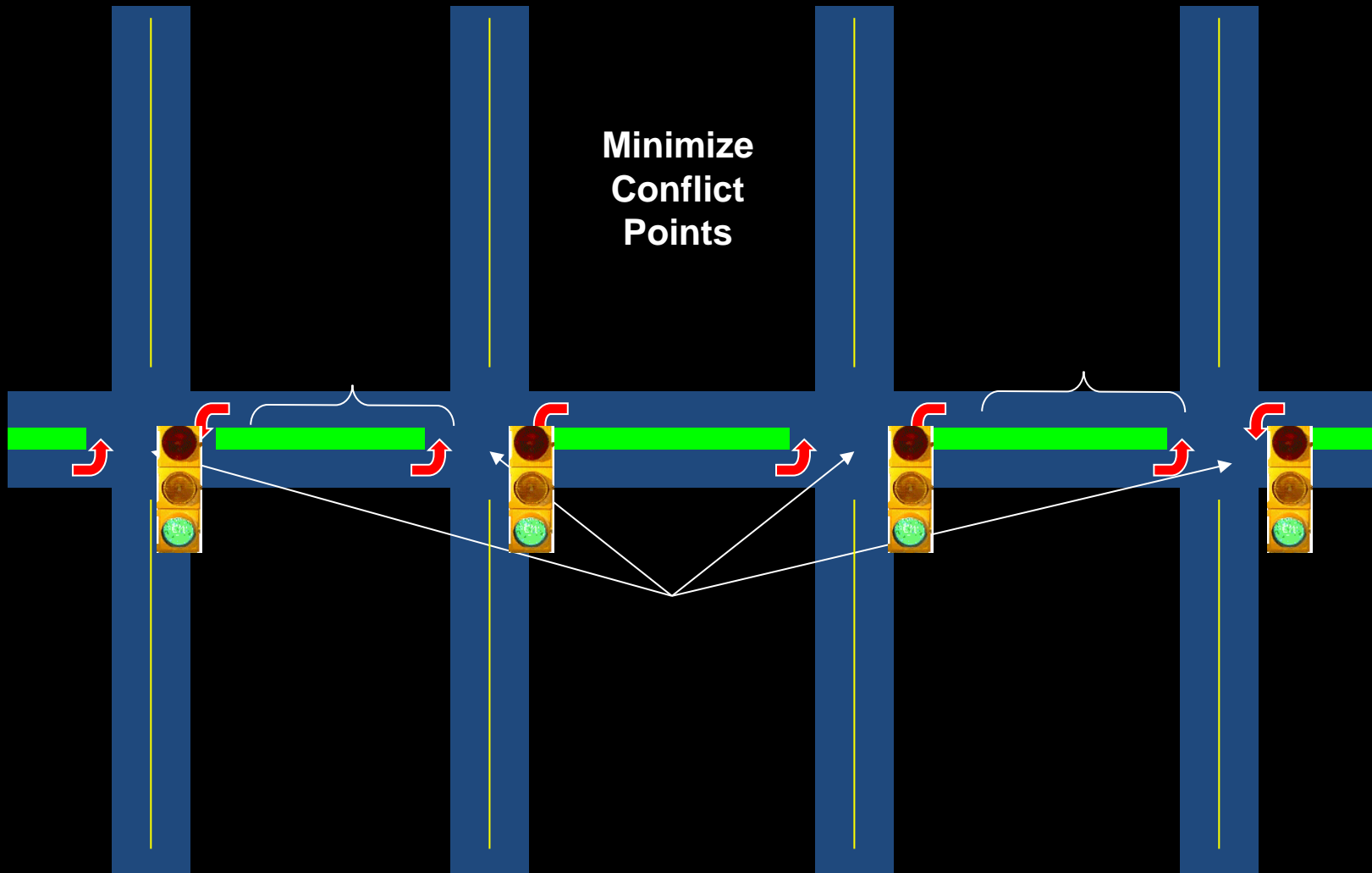
Partial Control

Expressway - Partial Control of Access

(Illustrative Example in Rural Setting)



Median Breaks and Crossovers



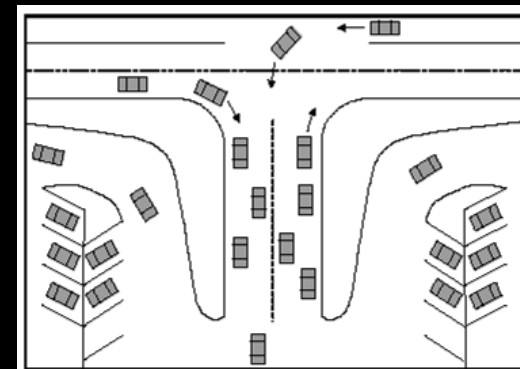
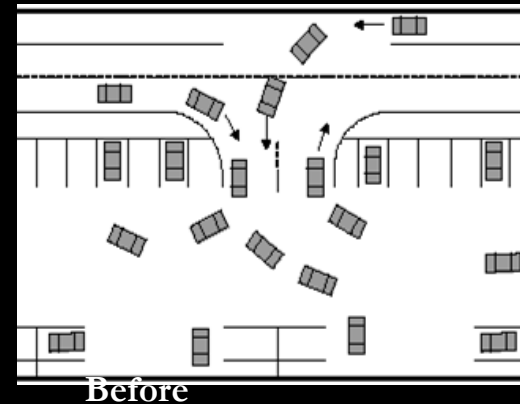
Traffic Signal Coordination

- Applies to more urban areas
- Potential to improve travel times & safety
- Synchronizes traffic signals to minimize 'through' traffic delay
- Accomplished by interconnecting signals into one system



On-Site Circulation / Shared Access

- Pushing back 'throat' of driveway helps to avoid spillback
- Improves safety/efficiency of roadway:
 - Concentrates slow moving vehicles in appropriate areas
 - Provides for right-turn deceleration lanes
- Limits number of access points into development



After

Improve Collector Street Network



- Create a network of interconnected streets
- Provides an alternative for shorter trips
- Implemented by development community

Median and U-Turn treatments

- Reduces number of conflict points at intersections
- Decreases frequency of crashes
- Relatively Inexpensive
- Needs to accommodate u-turns for larger vehicles
- Needs to address potential driver confusion
- Reduces delay by as much as 25% for minor roadway
- Travel time may not increase

VPS

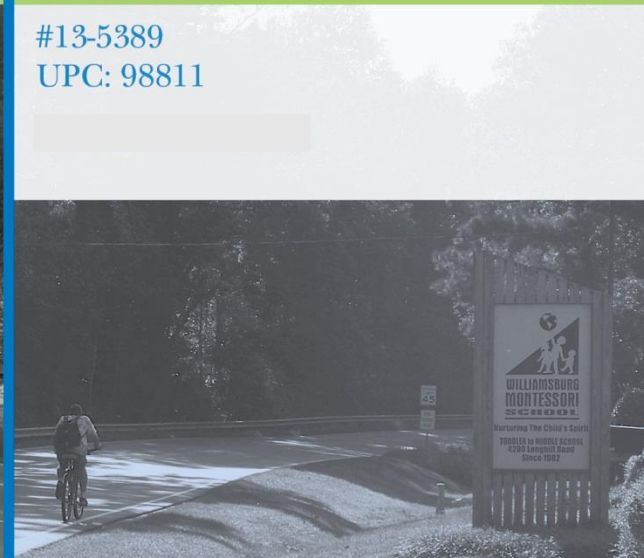


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Instructions



1

How familiar are you with corridor planning?

A

I'm an expert and probably should be giving this presentation.

B

I tried it once in college.

C

I'm familiar with the concept but I can't say I've done it before.

D

This is the first I've heard of it but it sounds exotic.

SAFETY

2 Cross Sections

A



B



C



D



3 Intersection Treatments



4 Signalized Intersections



5 Edge Treatments



6 Street Blades

A



B



C



D



7 Lighting

A



B



C



D



BICYCLE AND PEDESTRIAN

8 User Profile - Bicyclists

A



B



C



D



9 User Profile - Pedestrians

A



B



C



D



10 Bicycle Facilities

A



B



C



D



11 Pedestrian Facilities

A



B



C



D



12 Pedestrian Signage

A



B



C



D



13 Pedestrian Safety

A



B



C



D



14 Crosswalks

A



B



C



D



15 Bicyclists - Signage

A



B



C



D



AESTHETICS

16 Landscaping

A



B



C



D



17 Lighting

A



B



C



D



18 Intersections

A



B



C



D



19 Street Blades

A



B



C



D



OPERATIONS

20 Cross Sections

A



B



C



D



21 Intersection Treatments



Questions?

Summary of Visual Preference Survey Responses

		A	B	C	D	Responses
1	Test Question	2	2	20	16	40
2	Safety					
	Cross Sections	1	2	20	16	39
	Intersection Treatments	16	6	31	1	54
	Signalized Intersections	5	6	1	17	29
	Edge Treatments	13	5	0	28	46
	Street Blades	2	2	6	35	45
	Lighting	20	13	3	3	39
8	Bicycle and Pedestrian					
	User Profile - Bicyclists	1	10	24	9	44
	User Profile - Pedestrians	1	6	17	17	41
	Bicycle Facilities	0	0	14	29	43
	Pedestrian Facilities	10	2	30	0	42
	Pedestrian Signage	3	10	28	4	45
	Pedestrian Safety	11	2	6	15	34
14	Crosswalks	10	4	23	2	39
	Signage	13	3	11	11	38
16	Aesthetics					
	Landscaping	9	23	3	5	40
	Lighting	3	31	4	5	43
	Intersections	1	0	2	45	48
19	Street Blades	2	12	24	17	55
	Operations					
20	Cross Sections	1	12	20	4	37
	Intersection Treatments	19	9	0	12	40